AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-22. (Canceled)

23. (Currently amended) An adsorbing material for producing protective materials, said adsorbing material comprising:

a sheet-like carrier material;

an at least essentially air-impervious, water-vapor-pervious barrier layer;

wherein the barrier layer forms a continuous, uninterrupted layer on the carrier material, the thickness of the barrier layer being in the range from 1 to 500 um, and

wherein the barrier layer is permeation resistant to chemical poisons and warfare agents in that it prevents or at least retards the passage of chemical poisons and warfare agents; and

an adsorbing layer based on activated carbon,

wherein the barrier layer is atop the carrier material and also serves as a bonding layer for the adsorbing layer disposed on that side of the barrier layer which is remote from the carrier material and wherein the barrier layer is formed as a multilayered laminate or as a multilayered composite comprising at least ~~two~~ three interconnected layers or plies, and

wherein the multilayered laminate or the multilayered composite comprises a core layer and two outer layers connected to the core layer, the corer layer being formed on the basis of a cellulose- or polyurethane-based polymer and the two outer layers connected to the core layer being formed on the basis of a polyurethane.

24-28. Canceled

29. (Currently amended) The adsorbing material according to claim ~~25~~ 23, wherein the core layer is formed as a membrane 1 to 100 µm in thickness and wherein the two outer layers connected to the core layer are each formed as a membrane 1 to 100 µm in thickness.

30. (Previously presented) The adsorbing material according to claim 23, wherein the barrier layer has a 25°C water vapor transmission rate of at least 20 l/m^2 per 24 h when 50 µm in thickness and wherein the adsorbing material has a 25°C water vapor transmission rate of at least 10 l/m^2 per 24 h when the barrier layer is 50 µm in thickness.

31. (Previously presented) The adsorbing material according to claim 23, wherein the carrier material is an air-pervious textile material and has a basis weight in the range from 50 to 300 g/m^2.

32. (Currently amended) The adsorbing material according to claim 23, wherein ~~the barrier layer forms a continuous, uninterrupted layer on the carrier material, the thickness of the barrier layer being in the range from 1 to 500 µm and~~ the barrier layer ~~being~~ is applied in amounts from 1 to 250 g/m^2, based on the dry weight of the barrier layer.

33. (Previously presented) The adsorbing material according to claim 23, wherein the adsorbing layer comprises discrete activated carbon particles in granular or spherical form having medium diameters of the activated carbon particles of <0.5 mm.

34. (Previously presented) The adsorbing material according to claim 33, wherein the adsorbing material includes the activated carbon particles in an amount from 5 to 500 g/m^2 and wherein the activated carbon particles have an internal surface area (BET) in the range from 800 to 1500 g/m^2.

35. (Previously presented) The adsorbing material according to claim 23, wherein the adsorbing layer comprises activated carbon fibers in the form of an activated carbon fabric, said activated carbon fabric having a basis weight in the range from 20 to 200 g/m^2.

36. (Previously presented) The adsorbing material according to claim 23, wherein the adsorbing layer is additionally impregnated with at least one catalyst selected from the group consisting of enzymes and metal ions, the amount of catalyst being in the range from 0.05% to 12% by weight, based on the weight of the adsorbing layer.

37. (Previously presented) The adsorbing material according to claim 23, wherein the adsorbing material has a steady state water vapor transmission resistance R_{et}, measured according to DIN EN 31 092: 1993 (February 1994) and ISO 11 092, at 35°C of not more than 30 ($m^2 \cdot$ pascal)/watt when the barrier layer is 50 µm in thickness

38. (Currently amended) An adsorbing material for producing protective materials, said adsorbing material comprising:

a sheet-like carrier material;

an at least essentially air-impervious, water-vapor-pervious barrier layer,

wherein the barrier layer forms a continuous, uninterrupted layer on the carrier material, the thickness of the barrier layer being in the range from 1 to 500 um, and

wherein the barrier layer is permeation resistant to chemical poisons and warfare agents in that it prevents or at least retards the passage of chemical poisons and warfare agents; and

an adsorbing layer based on activated carbon;,

wherein the barrier layer is atop the carrier material and also serves as a bonding layer for the adsorbing layer disposed on that side of the barrier layer which is remote from the carrier material and wherein the barrier layer is formed as a multilayered laminate or as a multilayered composite comprising at least ~~two~~ three interconnected layers or plies,

wherein the multilayered laminate or the multilayered composite comprises a core layer and two outer layers connected to the core layer, the core layer being formed on the basis of a cellulose- or polyurethane-based polymer and the two outer layers connected to the core layer

being formed on the basis of a polyurethane,

said adsorbing material offering permeation resistance to the chemical warfare agent bis-[2-chloroethyl]-sulfide (mustard gas), measured according to CRDC-SP-84010, method 2.2, allowing not more than 4 $\mu g/cm^2$ per 24 h when the barrier layer is 50 μm in thickness.

39. (Previously presented) A process for producing an adsorbing material according to claim 23, said process comprising the following steps:

(a) providing a carrier material in continuous sheet form; then

(b) applying an aqueous dispersion comprising an isocyanate and an isocyanate-reactive crosslinker to the carrier material; then

(c) predrying the dispersion applied in step (b) until the water is removed, wherein the predrying temperatures are below the crosslinking temperature of the dispersion and amount to about 80°C to 120°C, to form a continuous uninterrupted tacky layer or film which also serves as a bonding layer for the layer or membrane based on a cellulose-based polymer to be applied in subsequent step (d); then

(d) applying a layer or membrane based on a cellulose-based polymer to the still tacky bonding layer generated in step (c); then

(e) applying an aqueous dispersion comprising an isocyanate and an isocyanate-reactive crosslinker to the step (d) applied layer or membrane based on a cellulose-based polymer; then

(f) optionally, predrying the dispersions applied in step (b) until the water is removed, wherein the predrying temperatures are below the crosslinking temperature of the dispersion and amount to about 80°C to 120°C, to form a continuous uninterrupted tacky layer or film which also serves as a bonding layer for the adsorbing layer to be applied in subsequent step (g); then

(g) applying the adsorbing layer to the step (e) applied layer, consisting of the dispersion, or else to the step (f) generated, still tacky bonding layer; then

(h) drying and crosslinking the dispersion or the still tacky bonding layer by heating to above the crosslinking temperature at temperatures of 140 to 180°C or more, to form a barrier layer supporting the adsorbing layer applied thereto; then

(i) optionally, applying a covering material to the adsorbing layer.

40. (Previously presented) A process for producing an adsorbing material according to claim 38, said process comprising the following steps:

(a) providing a carrier material in continuous sheet form; then

(b) applying an aqueous dispersion comprising an isocyanate and an isocyanate-reactive crosslinker to the carrier material; then

(c) predrying the dispersion applied in step (b) until the water is removed, wherein the predrying temperatures are below the crosslinking temperature of the dispersion and amount to about 80°C to 120°C, to form a continuous uninterrupted tacky layer or film which also serves as a bonding layer for the layer or membrane based on a cellulose-based polymer to be applied in subsequent step (d); then

(d) applying a layer or membrane based on a cellulose-based polymer to the still tacky bonding layer generated in step (c); then

(e) applying an aqueous dispersion comprising an isocyanate and an isocyanate-reactive crosslinker to the step (d) applied layer or membrane based on a cellulose-based polymer; then

(f) optionally, predrying the dispersions applied in step (b) until the water is removed, wherein the predrying temperatures are below the crosslinking temperature of the dispersion and amount to about 80°C to 120°C, to form a continuous uninterrupted tacky layer or film which also serves as a bonding layer for the adsorbing layer to be applied in subsequent step (g); then

(g) applying the adsorbing layer to the step (e) applied layer, consisting of the dispersion, or else to the step (f) generated, still tacky bonding layer; then

(h) drying and crosslinking the dispersion or the still tacky bonding layer by heating to above the crosslinking temperature at temperatures of 140 to 180°C or more, to form a barrier layer supporting the adsorbing layer applied thereto; then

(i) optionally, applying a covering material to the adsorbing layer.

41. (Currently amended) A process for producing an adsorbing material according to claim ~~1~~ 23, said process comprising the following steps:

(a) providing a release layer in the form of a siliconized or waxed release paper; then

(b) applying an aqueous dispersion comprising isocyanate and an isocyanate-reactive crosslinker to the release layer; then

(c) predrying the step (b) applied layer, consisting of the dispersion, until the water is removed, with or without crosslinking; then

(d) renewedly applying an aqueous dispersion comprising an isocyanate and an isocyanate-reactive crosslinker to the step (c) produced, dried and optionally crosslinked layer; then

(e) optionally predrying the step (d) produced second layer until the water is removed, and applying a carrier material in continuous sheet form to the second layer obtained in step (d); then

(f) optionally predrying the step (d) applied second layer until the water is removed, with or without crosslinking; then

(g) removing the release layer; then

(h) renewedly applying an aqueous dispersion comprising isocyanate and an isocyanate-reactive crosslinker to that side of the dried and optionally crosslinked layer obtained in step (c) that was previously covered with the release layer; then

(i) optionally predrying the dispersions applied in step (h) until the water is removed, the predrying temperatures being below the crosslinking temperature of the dispersion and amounting to about 80°C to 120°C, to form a continuous uninterrupted tacky layer or film which also serves as bonding layer for the adsorbing layer to be applied in subsequent step (j); then

(j) applying the adsorbing layer to the step (h) applied layer, consisting of the dispersion, or else to the step (i) generated, still tacky bonding layer; then

(k) drying and crosslinking the dispersion or the still tacky bonding layer by heating to above the crosslinking temperature at temperatures of 140 to 180°C or more, to form a barrier layer based on a laminate or composite of three interconnected polyurethane layers supporting the adsorbing layer applied thereto; then

(l) optionally, applying a covering material to the adsorbing layer.

42. (Previously presented) Protective material, said protective material comprising an adsorbing material according to claim 23.

43. (Currently amended) The protective material according to claim ~~23~~42, wherein the protective material is selected from the group consisting of protective suits, protective gloves and protective covers.